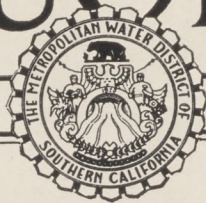


• COLORADO RIVER •
AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT



OF SOUTHERN CALIFORNIA

Vol. III.

JULY 23, 1936

No. 14



The Old and the New—A Section of Aqueduct Distribution Line, 10 feet 6 inches in diameter, passes under the canal of the Riverside Irrigation District.



Aqueducters—1928

Directory

BOARD OF DIRECTORS

W. P. Whitsett, Chairman
 Franklin Thomas, Vice-Chairman
 S. H. Finley, Secretary
 Anaheim.....E. P. Hapgood
 Beverly Hills.....Arthur Taylor
 Burbank.....J. L. Norwood
 Compton.....Warren W. Butler
 Fullerton.....Walter Humphreys
 Glendale.....Bernard Brennan
 Long Beach.....William M. Cook
 Los Angeles.....I. Eisner
 Los Angeles.....Perry H. Greer
 Los Angeles.....Otto J. Emme
 Los Angeles.....D. W. Pontius
 Los Angeles.....John R. Richards
 Los Angeles.....Victor H. Rossetti
 Los Angeles.....W. P. Whitsett
 Pasadena.....Franklin Thomas
 San Marino.....J. H. Ramboz
 Santa Ana.....S. H. Finley
 Santa Monica, Edmond S. Gillette
 Torrance.....Charles T. Rippey
 Charles H. Toll, Treasurer
 D. W. Pontius, Controller

GENERAL STAFF

General Manager and Chief Engineer.....F. E. Weymouth
 Asst. Gen. Mgr.....J. L. Burkholder
 Asst. Chief Engineer.....Julian Hinds
 General Counsel.....James H. Howard
 Asst. Gen. Counsel.....Arthur A. Weber
 Asst. Controller.....J. M. Luney
 General Supt.....James Munn
 Chief Elec. Engineer.....J. M. Gaylord
 Asst. to Gen. Mgr.....Don J. Kinsey
 Secy. to Gen. Mgr.....Elisabeth von Hagen

DIVISION ENGINEERS

Divisions 1 & 2.....W. E. Whittier
 Divisions 2 & 3.....John Stearns
 Division 4.....R. C. Booth
 Divisions 5 & 6.....J. B. Bond
 Distribution.....R. B. Diemer
 Transmission.....Robert N. Allen

SUPERINTENDENTS

(Main Aqueduct Tunnels)
 Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., W. A. Huntington and L. M. Ramey, Tunnel Supts.
 Coxcomb Tunnel and Iron Mt. shaft, Winston Bros., E. A.

Bernard, Gen. Supt.; F. T. Hillman and R. V. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Construction Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, C. J. Kavanagh, Gen. Supt.

Coachella Tunnel, Dist. Force Acct., R. C. Booth, Gen. Supt. Fargo, East Coachella Tunnel, concrete, V. T. Davis, Supt.

Pushawalla and Berdoo, East Coachella Tunnel, concrete, John Austin, Supt.

Thousand Palms, Lyle McMillen, Gen. Foreman.

Wide Canyon and Long Canyon, concrete, Kenneth MacIssac, Supt.

Morongo, R. Ferry, Supt. San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt., A. L. Simpson, Neil O'Donnell and C. E. Sides, Tunnel Supts.; Chas. F. Thomas, Jr., Gen. Foreman.

Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Fred Youmans, Tunnel Supt.; John Will, Concrete Supt.

(Distribution Tunnels)

Monrovia tunnels Nos. 1, 2 and 3, West Construction Co., H. E. Carleton, Gen. Supt.; O. V. Humason, Peter Brisbois and Angus MacDonnell, Tunnel Supts.

Sierra Madre tunnel, J. F. Shea Co., Inc., Edmund H. Shea, Supt.

Pasadena tunnel, San Rafael tunnels Nos. 1 and 2, and Monrovia tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., H. J. King, Gen. Supt.; S. D. Hackley and P. C. Guinn, Supts.

(Canal, Siphon, Conduit)

Schedules Nos. 1, 1A, 1B, 10, 10A, 10B, 11, 11A, 11B, 11C, 13, 13A, and 13B, Aqueduct Construction Co., S. T. Corfield, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt., and Charles Clapp, Supt.

Schedules Nos. 2, 2A, 2B, 3, 3A, 3B, 7 and 7A, Barrett &

Hill and Macco Corp.; H. W. McKinley, Supt.

Schedules Nos. 4, 4A, 5 and 5A, Jahn & Bressi Construction Co., Joseph Muscolo, Gen. Supt.; Dominick Bressi, Asst. Gen. Supt.

Schedules Nos. 6, 8, 8A and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesner, Gen. Supt.; L. L. Green, Excav. Supt.; A. V. Fisher and V. S. Price, Concrete Supts.

Schedules Nos. 9, 9A, 9B and 9C, The Utah Construction Co., Ben Arp, Gen. Supt.; E. C. Caldwell, Excav. Supt.

Schedules Nos. 12 and 12A, Three Companies, Inc., C. J. Kavanagh, Supt.

Schedules Nos. 14, 15 and 16, Thompson-Starrett Co., Inc., Rodney Smith, Resident Engineer; William Hayes, Excav. Supt.

Schedule 17, Dist. Force Acct., H. Hjalmarson, Gen. Foreman (Fan Hill) and P. J. Lynch, Gen. Foreman (Wide Siphon).

Schedule 18J, Morrison-Knudsen, J. O. Young, Gen. Supt.

Schedules Nos. 18, 19 and 20, J. F. Shea Co., Inc., H. F. Rennebohm, Supt.

Schedules Nos. 20A, 20B, 20C, 21, 22 and 23, The Griffith Co., Harry Davis, Supt.

(Distribution Pipe Line)

Schedules No. 4P & 5P, American Concrete & Steel Pipe Co., Wm. A. Whiting, Gen. Supt.; D. H. Rankin, Plant Supt.; J. C. Connell, Const. Supt.

Schedules 6P & 7P, J. F. Shea Co., Inc., Gilbert Shea, Gen. Supt.; Don Lind, Plant Supt.

Schedule 8P, United Concrete Pipe Corp., John Huber, Plant Supt.; Charles Johnston, Const. Supt.

Schedules 2B & 2S, Western Pipe & Steel Co., L. L. White, Supt.

(Dams)

Cajalco dam, The Griffith Co., Harry Davis, Gen. Supt.

Parker dam, Six Cos., Inc., Frank Crowe, Gen. Supt.; E. A. Moritz, Eng. in charge.

Photo of Aqueduct Old-Timers Found

A museum piece of rare antiquity was discovered this week by Archeologist Bob RuDesille while excavating in a pile of souvenirs. It was the accompanying picture of a group of aqueducters of the vintage of 1928, when the project was little more than a line on a map—and they weren't very sure of the line. Standing third from left is none other than Dick Stephens, now office engineer at Banning. In the back row, fifth from the left, is finder RuDesille, now in the Design division of the Los Angeles office. Sixth from the left in the back row is Neal Smith, now of the Banning office. Seated, first row left, is Mel Bonelli, now a member of the engineering staff on Division 5. Seated on the left end of the desk and wearing a handsome striped tie, is Dave May, now office engineer at Division 2. Standing just to the left of Dave is Owen Wilson, a member of the Design division staff. Harry Crawshaw, now of the Distribution division staff, is holding down the right hand end of the desk.

Iron And Steel For Open Work Will Be Ordered

Bids on furnishing 161,000 pounds of iron castings and fabricated steel, to be used in connection with aqueduct open work construction during the period ending next June, will be received at District headquarters on July 27. Included are pipes, valves, ladder rungs, manhole frames and covers, nuts, bolts, gaskets, and other items.

COLORADO RIVER AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. III July 23, 1936 No. 14

HOT WEATHER HEALTH RULES OUTLINED BY DOCTOR CAREY FOR WORKERS ON AQUEDUCT

With the arrival of hot summer weather along the aqueduct line, attention of all employees was called last week to facts concerning preventive measures and emergency treatment for heat or sun stroke and heat exhaustion.

The following material was compiled two years ago by Dr. T. Sheridan Carey, chief surgeon-medical officer of the District, for the study of all aqueduct workers and proved to be an important factor in lowering the number of heat stroke and heat exhaustion cases on the aqueduct:

HEAT STROKE

Generally caused by prolonged exposure to excessive heat, usually in the sun, although it may occur in hot rooms. Exhaustion and improper clothing preventing the proper elimination of heat from the body surface are powerful contributing factors.

Warning Symptoms

(1) Headache, (2) Dizziness, (3) Irritability, (4) Seeing things red or purplish, (5) Skin dry and hot, (6) PUPILS CONTRACTED, and (7) HIGH TEMPERATURE.

Treatment

Rapid reduction of temperature is necessary; that is: by disrobing patient in shade. Wring towels or cloths in cool water and apply over body surface, changing frequently. If possible, ice cap to head and cool bath. *Cool* water to drink—NOT ICE WATER. Have patient drink quantities of water, ABSOLUTE REST for 24 hours or longer. Liquid diet, cool orange juice, water, lemonade, etc.

HEAT EXHAUSTION

Causes same as those producing heat stroke.

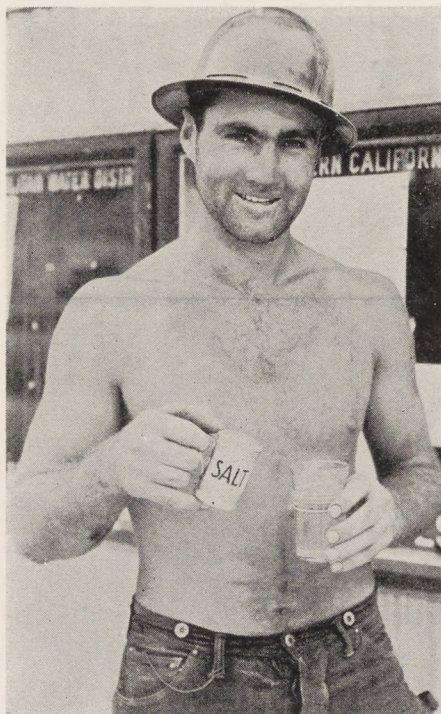
Warning Symptoms

(1) Dizziness, frequently with vomiting, (2) Cramps in muscles, (3) TEMPERATURE BELOW NORMAL, (4) Skin is pale, cool, and moist, (5) Pulse weak, and (7) Respiration shallow.

Treatment

Remove to cool place, apply HOT APPLICATIONS, WARM OR HOT BATH. Lower head, administer hot coffee or aromatic spirits of amonia (1 teaspoonful in a glass of cool water). Keep patient quiet in bed, blankets if necessary.

If emergency treatment does not re-



Gene Garner, of the Lawrence adit crews, demonstrates one of the prescribed methods for warding off heat exhaustion during the summer months. A teaspoonful of salt in a glass of water, taken at least once daily, holds up the saline content of the blood stream, an important factor in maintaining health during hot weather. For other summer health rules see the accompanying story.

lieve patient, get in touch at once with Berdoo Hospital.

PREVENTIVE MEASURES

Do not drink ICE water. Water should be cool or warm, but NOT cold.

Eat plenty of salads, vegetables and light food. Eat meat only the last meal of the day after work is finished and you are rested. Eat slowly. Save energy to counteract the heat, rather than to digest food, which has not been properly chewed.

Shoes should be extra large size on account of feet swelling during hot weather. Wool socks, flannel shirts, felt hats or helmets should be worn. Do not go about in the excessive heat without clothes.

USE COMMON SENSE. Desert heat will not overcome you if you are sensible and reasonable and use ordinary caution.

Ancient Aqueduct Landmark Turns Up Missing

Lost: One Spanish arrastre. No questions asked if returned.

Such is the "want ad" which aqueduct antique fanciers, out near the Colorado River, are thinking of inserting in the daily press as a sequel to one of the most interesting finds made by the early surveying crews on the project.

The long disused arrastre—primitive equivalent of a stamp mill—was discovered several years ago by Metropolitan engineers in a secluded desert valley near Bandit's pass in the Whipple Mountains, scene of many a swashbuckling episode of the last century. How long it had reposed there no one knew, but its existence created considerable interest among students of early California history.

Local estimates of the age of the old arrastre ranged from 60 to almost 100 years, since it had not been used in the memory of the oldest residents of the Whipple Mountain country, which, in times past, was extensively worked for gold and other precious metals.

That the machine was of Spanish origin was clearly indicated by details of its construction, according to mining experts. Built in the form of a large, four-spoked wheel over a basin hollowed out of solid rock, the device was turned by mule or horsepower. Ore was pulverized by heavy stones suspended from each spoke of the wheel.

But now, alas, the old landmark is gone—vanished in thin air without leaving a trace. How anyone could have made off with a thing so large remains a mystery.

But certain of the old-timers on the job maintain that things along the aqueduct would seem no more strange if somebody had walked off with Iron Mountain.

Bids On Furnishing Aggregates Asked

Sealed proposals for furnishing concrete aggregates for 36,500 cubic yards of concrete lining for the Morongo tunnels will be opened at 10 a. m., July 31, at District headquarters, 306 W. Third Street, Los Angeles. The aggregate will be used for the two Morongo bores and for short sections of siphon and modified conduit located nearby.

TUNNELS

* TUNNEL LINING (MILES)

Aqueduct	50.58	41.48
Distribution	1.64	14.54
Total	52.22	56.02

* Arch considered to equal 0.9 of completed section.

TUNNEL PROGRESS

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET					
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING
AQUEDUCT—CONTRACT													
WALSH CONSTRUCTION CO.	COLORADO RIVER	5,482		Completed		5,482	0	Arch			0	5,475	7
	COPPER BASIN NO. 1	705		Completed		705	0	Invert			0	5,475	7
	COPPER BASIN NO. 2	11,568		Completed		11,568	0	Arch			0	696	9
	WHIPPLE MOUNTAIN	(32,238)		Completed		(32,238)	(0)	Invert			0	696	9
	East from Adit	18,336		Completed		18,336	0	Arch			0	11,568	0
	West from Adit	13,902		Completed		13,902	0	Arch			0	11,568	0
									72	83.7	6,026	13,851	(32,238)
												0	18,336
												51	
WINSTON BROTHERS	IRON MT. (E. PORTION)	(23,645)				(23,645)	(0)					0	9,902
	East from Shaft	9,902		Completed		9,902	0	Invert					
	West from Shaft	13,743		Completed		13,743	0	Arch	46	80.6	3,707	9,887	15
								Invert	4	43.0	172	172	13,571
								Arch			0	13,728	15
UTAH CONSTRUCTION CO.	IRON MT. (W. PORTION)	16,172		Completed		16,172	0	Arch	65	66.2	4,298	15,380	792
								Invert				0	16,172
WINSTON BROTHERS	COXCOMB (From E. Portal)	17,795		Completed		17,795	0					0	17,795
BRODERICK & GORDON	E. EAGLE (From W. Portal)	9,440		Completed		9,440	0					0	9,440
	W. EAGLE (E. PORTION)	(15,845)		Completed		(15,845)	(0)					0	(15,845)
	East from Adit	7,871				7,871	0						
	West from Adit	7,974				7,974	0						
DRAVO CONTRACTING CO.	VALVERDE	(38,015)				(38,015)	0						
	East Portal to Shaft 3	21,415		Completed		21,415	0	Arch	39	28.6	1,116	38,014	1
	West from Shaft 3 }			Completed		8,964 }	0	Invert	9	227.7	2,050	34,195	3,820
	East from Adit }	12,067		Completed		3,103 }	0						
	West from Adit	4,533		Completed		4,533	0						
	TOTALS	Ft. 170,905 (32.37)				170,905 (32.37)	0 (0)	Arch Invert	222 13	68.2 171.0	15,147 2,222	108,599 52,106	62,306 118,799

AQUEDUCT — FORCE ACCOUNT

[illegible]

DISTRIBUTION—CONTRACT

Griffith Co.	CAJALCO OUTLET	2,565	50	11.0	548	918	1,647					0	2,565
WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,868		Completed		7,868	0		41	8.8	360	400	7,395
	MONROVIA NO. 2 (From Jct.1)	940		Completed		940	0					0	855
	MONROVIA NO. 3	(32,105)				(23,291)	(8,814)					0	(32,069)
	East from Adit	11,340	81	11.2	904	8,736	2,604						
	West from Adit		81	2.9	233	3,652							
	From West Portal	20,765	81	10.1	815	10,903	6,210						
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,096	76	0	0	3,083	5,013					0	8,084
J. F. SHEA CO., Inc.	SIERRA MADRE (From E. Prtl)	6,700		Completed		6,700	0		75	19.8	1,482	4,391	2,309
DIXON, BENT BROS. & JOHNSON	PASADENA EAST	5,546		Completed		5,546	0		81	16.3	1,321	3,883	1,663
	PASADENA (From West Portal)	12,140		Completed		12,140	0					0	12,140
	SAN RAFAEL No. 1 (From W.P.)	4,040		Completed		4,040	0					0	4,040
	SAN RAFAEL No. 2 (From E.P.)	5,669	75	8.7	650	3,021	2,648					0	5,669
	TOTALS	Ft. Miles	85,669 (16.23)	444	7.1	3,150 (0.60)	67,547 (12.80)	18,122 (3.43)	Full Section	197	16.1	3,163 (0.60)	8,674 (1.64)

ION PROGRESS

CANAL, CONDUIT AND SIPHON (MILES)

	Completed	Remaining
Excavation	112.81	32.97
Concrete	105.16	39.57
Back Fill	48.54	34.01

CANAL, CONDUIT, SIPHON & PIPE LINES

June 27 to July 11, 1936

DISTRIBUTION PIPE LINES (MILES)

	Completed	Remaining
Excavation	5.10	36.48
Concrete	3.60	37.98
Back Fill	2.73	38.85

AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
1	AQUEDUCT CONSTR. C.	Conduit and Siphons	22,025	0	22,025	0	0	22,025	0	1,255	17,900	4,125
2	BARRETT & HILP	Conduit and Siphons	30,569	846	28,301	2,268	0	24,584	5,985	0	22,400	8,169
3	AND MACCO CORP.	Canal and Siphons	40,700	0	37,895	2,805	0	32,005	8,695	0	1,390	11,255
4	JAHN & BRESSI	Canal and Siphons	53,218	0	53,218	0	0	53,218	0	0	1,992	1,083
5	CONSTR. CO.	Canal and Siphons	53,588	0	53,588	0	0	53,588	0	0	2,700	1,320
6	WOOD AND BEVANDA	Siphon	15,521	0	15,521	0	0	15,521	0	0	13,043	2,478
7	BARRETT & HILP & MACCO CORP.	Canal and Conduit	27,707	0	27,707	0	0	27,707	0	0	12,170	0
8	WOOD AND BEVANDA	Canal and Siphons	49,579	0	49,579	0	0	49,174	405	0	7,090	800
9	UTAH CONSTRUCTION CO.	Canal, Conduit and Siphons	47,399	0	45,788	1,611	0	44,074	3,325	0	793	5,442
10		Canal and Siphons	44,505	0	44,505	0	0	44,505	0	0	4,694	156
11	AQUEDUCT CONSTR. CO.	Canal, Conduit and Siphons	44,002	1,006	3,579	40,423	0	0	44,002	0	0	10,322
12	THREE COMPANIES, INC.	Conduit and Siphons	32,977	0	28,789	4,188	0	24,652	8,325	0	23,030	9,947
13	AQUEDUCT CONSTR. CO.	Canal, Conduit and Siphons	31,965	0	23,496	8,469	0	11,782	20,183	0	0	3,665
14		Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	2,816	32,366	0
15	THOMPSON-STARRETT CO.	Conduit and Siphons	35,849	0	423	35,426	0	403	35,446	0	0	35,849
16		Conduit and Siphons	19,359	0	0	19,359	0	0	19,359	0	0	19,359
17	M. W. D.—FORCE ACCT.	Conduit and Siphons	21,957	300	14,574	7,383	0	12,573	9,384	415	10,680	11,277
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	0	13,900	13,637	0	13,660	13,877	60	13,660	13,877
18J	MORRISON-KNUDSEN CO.	Siphons	9,809	0	9,809	0	0	9,809	0	0	9,809	0
19	J. F. SHEA CO., INC.	Conduit and Siphons	37,464	0	0	37,464	0	0	37,464	0	0	37,464
20		Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	M. W. D.—FORCE ACCT.	Siphons	735	0	705	30	0	0	735	0	0	735
21	GRIFFITH COMPANY	Siphons	14,613	0	14,613	0	0	14,613	0	594	14,613	0
22	(Outlet Channel Unlined)	Siphons	7,229	0	7,229	0	0	7,229	0	129	7,229	0
23		Conduit and Outlet Channel	38,695	90	38,350	345	0	33,145	0	500	32,157	988
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,632	245	0	589	1,288	300	530	1,268
4		Siphon (Copper Basin)	450	0	0	450	0	0	450	0	0	0
TOTALS			760,313	2,242	586,210	174,103	0	545,840	208,923	6,069	246,864	179,579

DISTRIBUTION PIPE LINES

1	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	12,227	0	12,227	0	0	12,227	0	0	12,227
2	WESTERN PIPE & STL. CO.	Welded Steel Pipe	54,530	3,000	8,000	46,530	957	957	53,573	0	54,530
3	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	20,124	0	20,124	0	0	20,124	0	0	20,124
4		Precast Concrete Pipe	25,867	1,930	15,287	10,580	1,933	15,188	10,679	2,107	14,407
5		Precast Concrete Pipe	24,895	0	24,895	0	0	24,895	0	0	24,895
6	J. F. SHEA CO., Inc.	Precast Concrete Pipe	27,348	455	735	26,613	0	0	27,348	0	27,348
7		Precast Concrete Pipe	30,044	0	30,044	0	0	30,044	0	0	30,044
8	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	24,525	1,420	2,901	21,624	1,958	2,855	21,670	0	24,525
TOTALS			219,560	6,805	26,923	192,637	4,848	19,000	200,560	2,107	14,407

MISCELLANEOUS CONSTRUCTION

June 27 to July 11, 1936

AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.				CONCRETE—Cu. Yds.				STEEL—Tons			
		Est.Quan.	Period	To Date	%	Est.Quan.	Period	To Date	%	Est.Quan.	Period	To Date	%
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	102,400	8,040	82,670	80.7								
	Gene Plant	92,600	1,963	76,433	82.5	13,370	0	961	7.2	2,052	7.0	7.0	0.3
WOOD AND BEVANDA	Iron Mt. Plant	358,700	0	224,245	62.5	19,897	0	55	0.3				
L. E. DIXON CO.	Eagle Plant	227,695	13,500	51,044	22.4	21,122	0	650	18.9	2,160	0	37.4	1.7
NOT AWARDED	Hayfield Plant												
TOTALS		23,503	434,392			0	1,666			7.0	44.4		

BOULDER TRANSMISSION LINE—FRITZ ZIEBARTH

FEATURES	Length-Line MI.	Period	To Date	Percent
Footings Constructed	237.0	6.5	163.6	69.0
Towers Erected	237.0	10.3	35.3	14.9
Wire Strung	237.0	0	0	0

TELEPHONE LINES—NEWBERRY ELECTRIC CO.

FEATURES	Length-Line MI.	Period	To Date	Percent
Converting Spur to Truck Line	7.8	0	7.8	100
Constructing New Trunk Line	139.5	0	139.5	100

PARKER RESERVOIR—SIX COMPANIES, INC.

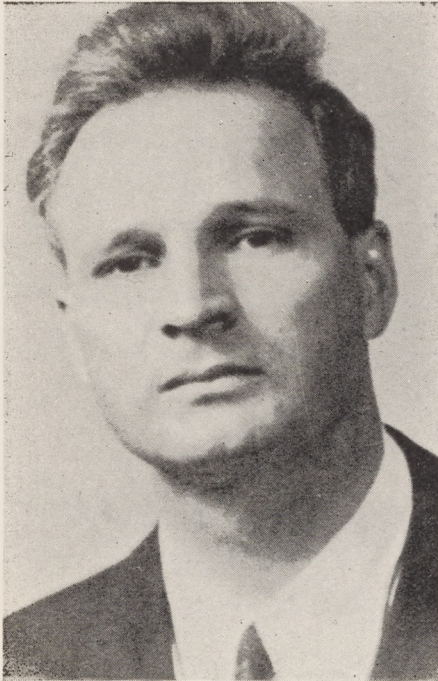
FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100
Diversion Tunnels—Concrete	3,463 Ft.	665	1,955	56.4
Dam Excavation	1,391,000 C.Y.	3,000	141,264	10.2
Dam Concrete	277,900 C.Y.	0	0	0

CAJALCO RESERVOIR—GRIFFITH COMPANY

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnel	2,000 Ft.	0	2,000	100
Dam & Dike Excavation	651,000 C.Y.	48,110	209,925	32.2
Dike Fill	4,113,000 C.Y.	108,000	2,829,280	68.8
Dam Fill	3,410,000 C.Y.	79,400	141,800	4.2

COMPLETED FEATURES

TUNNELS					CANAL, CONDUIT AND SIPHON				
CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed	CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35	UNITED CONC. PIPE CO.	LITTLE MORONGO SIPHON	0.13	2-27-34	8-20-34
WEST CONSTRUCTION CO.	Whitewater Nos 1 & 2	1.94	7-18-33	4-15-35	M.W.D.—FORCE ACCT.	FAN HILL COND. & SIPHON	0.32	10-21-33	11-19-34
SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-35	GRIFFITH COMPANY	SCHEDULE NO. 20-C	1.33	5-3-35	9-14-35
HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35					
J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35					
HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36					
DIXON & BENT BROS.	W. Eagle-W. Por.	2.02	9-8-33	3-12-36					
TOTALS		12.95			TOTALS		1.78		



Russell C. Swihart

Extended Service Record Is Cited

Another name has been added to the roster of aqueduct old-timers by Bruce Noble, head timekeeper on Division 4, from whom the NEWS has received the following:

"Concerning records of continuous service, I am submitting for honorable mention the name of Russell C. Swihart, who has been dealing them off the arm in mess halls along Division 4 since July 12, 1933.

"Although Mr. Swihart's length of service may be topped by a few others, he has not lost a single shift during this time with the exception of regular shut-downs and vacations. He has changed camps only once (from Wide Canyon to Fargo camp) and has not changed departments or positions."

Plan Batching Plant At E. Portal of S. J.

Preparing to place concrete lining in the eastern end of San Jacinto tunnel, the east portal of which is scheduled to be holed through from Cabazon shaft in September, the District will receive bids on August 4 on the furnishing and erecting of steel structures for the East Portal Batching plant. Approximately 600 feet remain to be excavated before crews break through to daylight at this end of the tunnel.

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in July and covering work done in June.)

Legal Division

All necessary documents to secure payment for Interim Certificate No. 43, in the principal sum of \$1,476,000, covering bonds heretofore sold to the R. F. C., were prepared, and payment for said certificate made on June 23, 1936.

Miscellaneous Activities Division

Twelve hundred and fifty employment applications were cleared through the District's Labor Employment Office as eligible, from the standpoint of residence, for work on the aqueduct. Of this number 800 were made available in response to requisitions for force account work, and 450 were made available for aqueduct contractors. Certificate of registration were issued to 229 applicants.

Field Engineering and Construction

Testing Laboratory — During the month of June approximately 199,300 barrels of cement were sampled and tested. Nine hundred and seventy-six concrete specimens were received from the work in the field and prepared for tests. Approximately 215,397 barrels of cement was shipped to the aqueduct and distribution system work.

Operation of Utilities — During the period May 16 to June 15, 5,831,729 kw. hr. of power was used; 17,869 long distance telephone calls were handled; and 5,855,331 cubic feet of water was delivered.

Aqueduct Construction — See tables on Pages 4 and 5 for current construction progress figures.

Civil Engineering Division

Specifications — Specifications 159 for transformers for the pumping plants and Specifications 154 for 4.42 miles of 10-foot diameter pipe lines on the distribution system were issued during the month. Work was in progress at the end of the month on specifications for San Gabriel, Monrovia, and Eagle Rock crossings on the Upper Feeder, and for construction of Hayfield pumping plant on the main aqueduct.

Design — Designs and drawings were prepared for aqueduct structures to be built in connection with the Hayfield pumping plant and for the San Gabriel, Monrovia, and Eagle Rock Canyon crossings on the Upper Feeder. Studies on Copper Basin and Gene dam con-

tinued, and plans were prepared for relocation of the Cajalco reservoir outlet tower and the Long Canyon main aqueduct siphon.

Hydrography — Field studies were made and a memorandum prepared in connection with the construction water system. Plans were outlined for the avoidance of water shortages, and in particular for the supplying of additional water to District aggregate plants, if found necessary in order to secure better concrete or for the purpose of remedying the dust situation.

Distribution Division

Operations on all distribution system tunnels were changed over from a 30-hour to a 40-hour week basis on June 7.

Electrical Engineering Division

The staking of the Boulder Dam-Aqueduct transmission line was completed by District crews. Inspection was continued of the steel towers being fabricated by the Pacific Coast Steel Corporation and of the aluminum conductor being furnished by the Aluminum Company of America. Fabrication and testing of the copper conductor was completed. Excavation work is being continued through the summer at Intake and Eagle Mountain pumping plants, but all other work on the pumping plants will be practically at a standstill until Fall.

Personnel Division

There were 78 classified positions filled during June, of which 70 were permanent and eight were temporary. Forty of the permanent positions were filled by transfers from other classified positions and three were filled by transfers from unclassified positions. The net turnover for all divisions for May was 16.13 per cent. This is the highest turnover to date.

Purchasing Division

A total of 2,227 purchase orders was issued during June, covering purchases amounting to approximately \$293,516.

Accounting and Costkeeping

Actual costs up to June 30, 1936, amounted to \$85,682,489.09, covering work and activities, the total cost of which is estimated at \$155,494,354.

NEWS FROM FIELD AND OFFICE

The Big Job and the Big Game won't interfere with each other. That fact was determined last week when an agreement was signed by the Metropolitan Water District and the city of Pasadena covering right-of-way across the Arroyo Seco to carry the upper feeder of the aqueduct distribution system. The District agreed not to have any open ditches, equipment or anything else in the Arroyo on January 1 that would interfere with automobile parking in connection with the East-West football game of the Tournament of Roses.

* * *

Camp Clerk P. M. Mercer submits the following excerpt from a letter from a would-be aqueduct employee: "I've done everything from chief cook and bottle washer to barnyard pilot—you know, pilot here and pilot there. I can cook, wash dishes, swing a pick, do first-aid work, drink, smoke, chew, play anything but good poker, play ping-pong, pitch horseshoes, and am a damn good chemist, even if the Prof. didn't think so. Now, I'm not trying to play dirty politics or anything, all I want is a job at \$10 a day plus room and board, and a valet to press my shoe laces."

* * *

Miss Mary Darmstandler and Julius Klain, of the District engineering forces, were united in marriage Saturday, July 4. Rabbi Dr. Mayer Winkler performed the ceremony in the presence of relatives and friends.

* * *

Sealed proposals for furnishing and fabricating steel water stops for construction and dummy joints in 16-foot cut-and-cover conduit and modified conduit will be opened at District headquarters at 10 a. m., July 28.

* * *

Acting on the recommendation of General Manager Weymouth, the District Board of Directors, on July 10, awarded a contract to the Cyclops Iron Works for furnishing traveling cranes for use in the aqueduct pumping plants.

* * *

Sam Clayton, member of the Mails and Files division staff since 1931, has resigned his position to accept a post with the Oakland Journal, in Oakland, which is published by Sam's father.

* * *

C. M. Elliot has been succeeded as general superintendent of the Aqueduct Construction Company, on aqueduct open work, by S. T. Corfield.

The Coachella division safety flag for June was won by the Fargo excavation crews, who worked 42,908 man-hours with no lost-time accidents. Five camps on the division (Fargo excavation, Morongo excavation, Wide aggregate, Fan Hill aggregate, and 1000 Palms excavation) worked a total of 121,101 man-hours during the month without a lost-time injury.

The San Jacinto tunnel safety flag was awarded to West Portal crews, who worked 43,017 man-hours without a lost-time accident.

Aqueduct Temperatures July 1 to July 15, 1936

	Max.	Min.
Div. 1	117°	69°
Div. 2	115°	71°
Div. 3	115°	71°
Div. 4	111°	66°
Divs. 5 and 6.....	103°	52°



No, friends, this isn't a man from Mars. It's G. E. McFarland, Western Pipe & Steel Company welder, on Schedule 2S of the distribution system, coming up for air.

A steady decline in accidents on the Metropolitan Water District Aqueduct was revealed last week in the monthly report of General Manager Weymouth. The report showed that on the aqueduct as a whole, the lost-time accident frequency rate has decreased 67 per cent below the record of the first year of aqueduct construction, beginning July 1, 1933. It was further shown that the accident frequency on the Metropolitan project during the third fiscal year of construction is 20 per cent below the average frequency for other heavy construction in California comparable to that on the aqueduct.

* * *

M. S. Kitley, of the Griffith Company shops at Cajalco, is needing larger sized hats these days. It's because his step-son, Roy Staley, U. S. C. freshman, made the American Olympic team in the 120-yard high hurdles and is now en route to Berlin. If you don't think the boy's a world-beater, just ask around the shops—and you'll be told in no uncertain terms.

* * *

Many aqueduct friends will be interested in the news that Max J. Dunham is now field engineer on the Hanrahan Company contract for state highway work between Fresno and Biola Junction. Max formerly served as field engineer for the Aqueduct Construction Company on the aqueduct job, and prior to that was for several years on the engineering staff of the District.

* * *

Herman Stokes, mucking machine operator for Broderick & Gordon on the Cajalco outlet tunnel, has resigned his job to enter the employ of the Utah Construction Company, which is driving a water tunnel near Cody, Wyoming.

* * *

Jack H. Kellums, formerly general clerk on Division 4, is now holding down a similar job on Division 2.

* * *

Inspector Ray Powell, formerly of Division 2, has been transferred to the Distribution division.

* * *

John W. Maxwell, inspector on Division 1, has been transferred to the Distribution division.

* * *

Inspector Clyde F. Wilson has been transferred from Division 1 to the Testing Lab in Banning.

Call For Bids On Fifth Pumping Plant

Sealed proposals for building the Hayfield pumping plant will be opened August 27 at 10 a. m., at District headquarters, 306 W. Third Street, Los Angeles.

Most westerly of the aqueduct pumping stations, the Hayfield plant is also the last of the five to be advertised. The other four plants—Intake, Gene, Iron Mountain, and Eagle Mountain—are now under construction.

The new plant will be erected on the aqueduct line near Desert Center, approximately 270 miles east of Los Angeles. It will be located adjacent to Hayfield reservoir.

Under specifications for the job, the work has been divided into two schedules. Schedule No. 1 covers construction of the pumping plant buildings, steel delivery lines, and appurtenant works, while Schedule No. 2 includes the sand trap, wasteway, spillway, and approach channel.

The buildings are to be reinforced concrete and steel construction and the switch and bus structures of galvanized structural steel erected on concrete foundations. With the exception of cement, reinforcement steel and certain other materials, as provided in the specifications to be furnished by the District, the contractor will be required to furnish all labor, materials, equipment, supplies, and tools necessary to complete the work exclusive of the installation of machinery.

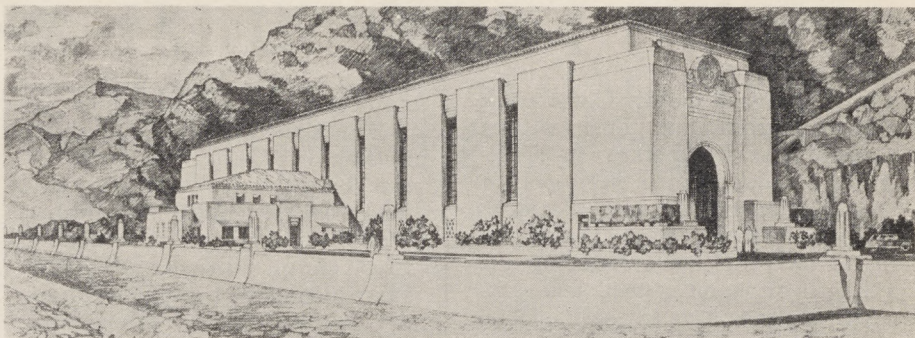
It is required that each bid must be accompanied by a certified or cashier's check of \$125,000.

The new Hayfield plant, like the other four, is designed with modernistic architectural lines. The buildings will be roofed with mission tile.

Also like the other four plants, the Hayfield pump station ultimately will contain nine pumps of approximately 200 cubic feet per second capacity each. Three units will be installed initially, with other units being added as the demand for water increases. This progressive plan of installation allows for one spare unit which always will be ready for an emergency.

The Hayfield lift, 444 feet, is the highest on the aqueduct, which involves a total lift of approximately 1,616 feet.

All five of the pumping plants are to be operated with power generated at Boulder Dam.



Hayfield Pumping Plant—Daniel A. Elliott, Architect

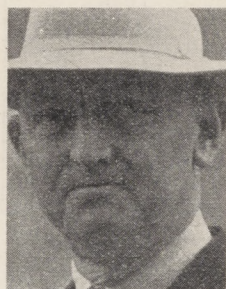
Who's Who On the Aqueduct

(Another of a Series of Short Biographies of Aqueduct Personalities.)

FRANK T. CROWE

*Gen. Supt., Parker Dam,
J. F. Shea Co.*

Born in Province of Quebec, Canada. Graduated from Maine University in



Frank T. Crowe

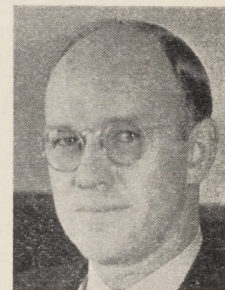
1905... Worked for F. E. Weymouth in 1904 as rodman, with Mr. Weymouth packing the transit... During 1906-07-08, worked for James Munn & Co. (the same James Munn who is now general superintendent of the District)... Joined Reclamation Service in 1910, remaining until 1925 as superintendent of construction on important projects... Asked to summarize career, Mr. Crowe reports, "Just a life of dams, starting on the Lower Yellowstone Dam and followed by: Jackson Lake, Arrow Rock, McDonald Lake, Little Bitter Root Lake, Tieton, Guernsey, Combia, Deadwood, Boulder—and now Parker"... Is married and has two children.

A. W. MCKINLAY

*Chief Accountant, Metro.
Water District*

Born in St. Louis... Attended Washington University... Was engineer for St. Louis Street Railways in 1911... Was with Stone & Webster from 1912 to 1913 as camp supervisor, time-keeper, materials and warehouse man, materials inspector, cost accountant, and job

office manager on various construction projects including office buildings, steam and hydroelectric plants, manufacturing plants... Some of the projects on which he was associated included Keokuk hydro development and transmission line, Long Beach steam plant of Southern California Edison Co, Hog Island development and shipbuilding for Emergency Fleet Corp. during war... 1st National Bank building, Boston... Has been with M. W. D. since 1931... Is married; answers to the name of "Mac."



A. W. McKinlay

RODNEY JASPER SMITH

*Res. Eng., Thompson-Starrett
Company*

Born at Central Islip, Long Island, N. Y.... Graduated from Rensselaer Polytechnic Institute... Construction career covers work on a wide range of important buildings in eastern United States, including explosive plant at Nitro, W. Va.; Providence Biltmore Hotel, Providence, R. I.; Industrial Building, Newark, N. J.; Grant Building, Pittsburgh, Pa.; Continental Bank, N. Y. City; Waldorf Astoria Hotel, N. Y. City, and the Downtown Athletic Club, N. Y. City... Is now resident engineer on Schedules Nos. 14, 15, and 16... Is married and is father of a daughter... Next to construction, his biggest delight is digging Long Island clams.



Rodney Jasper Smith